Small Animal Clinic **Hancock County** **Ellsworth, Maine** **A-541-71-E-A**	**Departmental** **Findings of Fact and Order** **Air Emission License** **Amendment #1**

After review of the air emission license amendment application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. Small Animal Clinic (SAC) of Ellsworth, Maine was issued Air Emission License A-541-71-D-N on October 30, 2002 permitting the operation of emission sources associated with their Class IV-A (veterinary) incinerator.

2. SAC has requested an amendment to their license in order to add an additional incinerator to their license.

B. New Equipment to be Licensed

SAC has proposed the addition of a second incinerator (Incinerator #2). Incinerator #2 is a Shenandoah Model P25-2G-M1 with the following specifications:

Class Incinerator	IV-A
No. of Chambers	2
Type of Waste	Type 4
Max. Design (Combustion/Feed) Rate	60 lb/hr
Auxiliary Fuel Input: **Primary Chamber (Btu/hr)** **Secondary Chamber (Btu/hr)**	LPG 319,000 Btu/hr 800,000 Btu/hr
Emission Control	Afterburner

C. Application Classification

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the "Significant Emission Levels" as defined in the Department's regulations. The emission increases are determined by subtracting the current licensed emissions preceding the modification from the maximum future licensed allowed emissions, as follows:

Pollutant	**Current License (TPY)**	**Future License (TPY)**	**Net Change (TPY)**	**Sig. Level**
PM	0.8	1.6	+0.8	100
PM_{10}	0.8	1.6	+0.8	100
SO_2	0.1	0.2	+0.1	100
NO_x	0.8	1.6	+0.8	100
CO	0.1	0.2	+0.1	100
VOC	0.1	0.2	+0.1	50

This modification is determined to be a minor modification and has been processed as such.

BEST PRACTICAL TREATMENT

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT) , as defined in Chapter 100 of the Air Regulations.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Technology (BACT) as defined in Chapter 100 of the Air Regulations. BACT is a top down approach to selecting air emission controls considering economic, environmental and energy impacts. BACT for Incinerator #2 includes the following:

Operating temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1600^0F with a stack gas retention time, at or above 1600^0F, of at least 1.0 second.

To ensure an efficient burn, and to prevent odors and visible emissions, the secondary chamber shall be preheated, as specified by the manufacturer, until the pyrometer measures a minimum of 1400^0F prior to commencing the burn cycle.

Once the burn cycle has commenced by introduction of primary chamber combustion, the incinerator shall be operated in an efficient manner, and as specified by the manufacturer,

for the period of time between preheat and reaching the set operational temperature to be a minimum of 1600^0F in the secondary chamber.

The temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1600^0F for the duration of the burn cycle.

A pyrometer and ¼ inch test port shall be installed, operated and maintained at the location of the incinerator or refractory lined stack, which provides sufficient volume to insure a flue gas retention time of not less than 1.0 second at a minimum of 1600^0F.

A log will be maintained recording the weight of the waste charged, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight of waste charged may be logged on the chart.

A minimum particulate emission rate of 0.12 gr/dscf corrected to 12% CO_2 must be met.

Visible emissions from the incinerator shall not exceed 10% opacity based on a six (6) minute block average basis.

The ash will be disposed of in accordance with the requirements of the Bureau of Remediation and Waste Management.

The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

III. AIR QUALITY ANALYSIS

According to Chapter 115 of the Maine Bureau of Air Quality Regulations, the level of air quality analysis and monitoring are determined on a case-by-case basis. Based on analysis for similar sources, the size of the source, the allowable emissions, the location, and the stack height, ambient air quality standards, including increments, are not expected to be violated. Therefore, an ambient air impact analysis will not be required for this source at this time.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this above source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-541-71-E-A subject to the conditions found in Air Emission License A-541-71-D-N and in the following conditions:

Condition (16) of Air Emission License A-541-71-D-N is deleted.

The following are new Conditions:

(20) Incinerators #1 and #2 shall be used for the disposal of type 4 (veterinary) waste and shall not be used for the disposal of plastics (other than the bag containing the animal), cytotoxic (antineoplastic) drugs or any radioactive wastes and shall not be used to dispose of any medical waste classified as type 7 waste, as defined in Maine Air Regulations Chapter 100.

(21) Incinerators #1 and #2 shall each not exceed the maximum design charging rate of 60 lbs/hr. Auxiliary fuel input to the primary and secondary chambers shall be propane.

(22) A log shall be maintained for each incinerator recording the weight of waste charged, preheating time, charging time, afterburner temperature directly after charging and every 60 minutes after startup until, and including, final shutdown time, and time of final shutdown. For facilities operating a chart recorder, the start time, date, and weight of waste charged may be logged on the chart.

(23) The secondary chambers shall be preheated as specified by the manufacturer to a minimum of 1400^0F prior to combusting any waste and shall be maintained at a minimum of 1600^0F during the duration of the burn.

(24) Once the burn cycle has commenced by introduction of primary chamber combustion, Incicnerators #1 and #2 shall each be operated in an efficient manner and as specified by the manufacturer for the period of time between preheat and reaching the set operational temperature to be a minimum of 1600^0F in the secondary chamber.

(25) For Incinerators #1 and #2, a pyrometer and ¼ inch test port shall be operated and maintained at that location of the incinerator or refractory lined stack which provides

sufficient volume to insure a flue gas retention time of not less than 1.0 second at the minimum of 1600^0F.

(26) Incinerators #1 and #2 shall each not exceed a particulate matter emission limit of 0.12 gr/dscf corrected to12% CO_2 from the auxiliary fuel.

(27) Visible emissions from Incinerator #1 and Incinerator #2 shall each not exceed an opacity limit of 10% based on a six (6) minute block average basis.

(28) Combustion gases from Incinerators #1 and #2 shall vent to a stack of at least 20 feet AGL.

(29) The ash will be disposed of in accordance with the requirements of the Bureau of Remediation and Waste Management.

(30) Incinerator operator(s) shall receive adequate training to operate the incinerators in accordance with the manufacturer's specifications, and shall be familiar with the terms of this Air Emission as it pertains to the operation of the incinerator.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
DAWN R. GALLAGHER, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-541-71-D-N.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 9/20/04
Date of application acceptance: 9/21/04

Date filed with the Board of Environmental Protection: _____

This Order prepared by Lynn Ross, Bureau of Air Quality.